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CENTRAL FAX CENTERAmendments to the Specification:

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[0048] As shown in FIG. 2, the actuation mechanism inside the door lock structure is mounted inside the casing 112 of FIG. 1 and comprises a pair of sliding blocks 36, which are respectively positioned in opposite directions inside the sliding block supports 35 on both lateral sides of the base body 21, and a pair of first driving pieces 37, which are respectively connected with the sliding blocks 36 and penetrated by said pins 36a. As shown in FIG. 3, each of the first driving pieces 37 is formed to pivotally turn and shift on the base body 21 in right-angled curving shape to connect to each of the sliding blocks 36. Each of the first driving pieces 37 further comprises a first nose 37a, a second nose 37b and a third nose 37c, with pivot holes 37d, 37e and 37f respectively formed on said noses. The first nose 37a of the first driving piece 37 is rotatably and pivotally connected with the sliding block 36 through the hole 37d; the second nose 37b is pivotally connected to the base body 21 through the hole 37e; the third nose 37c is pivotally connected to the latch block 33 through the hole 37f.

[0056] As shown in FIG. 6, the latch block 33 comprises two pivot holes 33a formed through both sides thereof, a pivot hole 33b on the top of one side thereof and a recess portion 33c formed near the side of the pivot hole 33b. The latch block 33 is connected with each third nose 37c of the first driving pieces 37 through the two pivot holes 33a, and, in addition, connected with the linking pieces 29 through the pivot hole 33b. The recess portion 33c enables no contact of the latch block 33 is made with the casing 112 while the latch block 33 is retracted to the inside or extended outside of the latching supports. The embodiment illustrates that the latch block 33 is pivotally connected to each third nose 37c of the first driving piece 37 by the holes 33a on both sides of the latch block 33 for actuating the first driving pieces 37. It is understood that the first driving piece 37 can also be driven by the latch block 33 in other structural forms. For example, the latch block 33 may have two retaining portions formed both lateral sides, thereby enabling each third nose 37c of the first driving pieces 37 to be pivotally

shifted and retained inside the latch block 33. Therefore, a latch block can vary without being limited by the embodiment herein.

[0057] The latch members 4 and 6 are separately positioned on the upper and the lower sides of the fire-blocking door 100, and respectively connected to the actuation mechanism inside the door lock structure on both sides of the base body 21 by the pull rods 38 and 39. As shown in FIGS. 1, 7A and 7B, the latch members 4 and 6 respectively comprise latching frames 41 and 61, latching supports 42 and 62, latching bodies 43 and 63, stop pieces 44 and 64, and second driving piece pieces 45 and 65.

[0058] The latching frames 41 and 61 are frames with recess portions for accommodating the latching supports 42 and 62, the latching bodies 43 and 63, the stop pieces 44 and 64, and the second driving piece pieces 45 and 65. The latching frame 41 is formed with guide slot 41a and holes 41b and 41c; the latching frame 61 is formed with guide slot 61a and holes 61b and 61c. The latching support 42 has guide slots 42a and 42b formed therein; the latching support 62 has guide slots 62a and 62b formed therein. The guide slots 42a and 62a of the latching supports correspond to the guide slots 41a and 61a of the respective-latching frames 41 and 61, thereby both of the latching supports 42 and 62 are separately and movably positioned inside the latching frames 41 and 61. The latching bodies 43 and 63, the stop pieces 44 and 64, and the second driving pieces 45 and 65 are separately positioned inside the latching supports 42 and 62.

[0061] The second driving pieces 45 and 65 further separately have holes 45a and 65a formed corresponding to the guide slots 41a and 61a of the latching frames 41 and 61, the guide slots 42a and 62a of the latching supports 42 and 62, and the guide slots 44a and 64a of the stop pieces 44 and 64. The second driving pieces 45 and 65, therefore, separately enable each end thereof to be pivotally connected with the latching frames 41 and 61, the latching supports 42 and 62, and the stop pieces 44 and 64. In addition,

the second driving pieces 45 can optionally be connected to the positioning portion 44b of the stop piece 44 by dint of at least one first spring member 4b, which enables the stop piece 44 to be retained at a fixed position (i.e., securely urged against the position of the latching bodies 43) when no external force is applied. In other words, the stop piece 44 can be utilized for retaining the latching body 43 at a position, thereby part of the latching body 43 can be extended outside of the latching support 42. Conversely, the latching body 43 can be retracted inside of the latching support 42 and the force of retaining the latching body 43 is released when an external force is applied.

[0062] Meanwhile, the second driving pieces 45 and 65 have the other sides thereof connected with the pull rods 38 and 39 each, thereby the stop pieces 44 and 64 can be shifted by an applied force from the pull rods 38 and 39.

[0063] The embodiment illustrates that the latching frames 41 and 61, the latching supports 42 and 62, and the second driving pieces 45 and 65 each have one of their ends separately and pivotally connected with the stop pieces 44 and 64 by second shafts 4c and 6c, and, in addition, have the other ends pivotally connected to and respectively penetrated by the pull rods 38 and 39 by dint of third shafts 4e and 6e; thereby the latching supports 42 and 62, the stop pieces 44 and 64 and the second driving pieces 45 and 65 are simultaneously actuated. The assembled latch member 4 is shown in FIG. 8.

[0064] At least a second spring member 4d can be selectively positioned between the latching frame 41 and the second driving piece 45. The second spring member 4d is not compressed when the second driving pieces 45 and 65 are not pulled by the pull rods 38 and 39. The second spiral spring 4d is compressed when an external force is applied and the second driving pieces 45 and 65 are pulled by the pull rods 38 and 39. When the pull force from the pull rods 38 and 39 is released, the latching supports 42

and 62, the latching bodies 43 and 63, the stop pieces 44 and 64, and the second driving pieces 45 and 65 are restored to their original positions due to an elastic force from the spiral spring.

[0065] The embodiment merely illustrates that the second driving piece 45 and the stop piece 44 are connected by the first spring member 4b, and the latching frame 41 and the stop piece 44 are connected by the second spring member 4d. Since the latch members 4 and 6 are actuated together, it is sufficient to have the first spring member 4b and the second spring member 4d positioned at either latch member 4 or latch member 6 in actual practice. The invention further enables another first spring member 4b to connect the driving piece 65 and the positioning portion 64b of the stop piece 64, or a plurality of second spring members 4d to be positioned depending on the actual needs. It should be understood that the simplified structure in the embodiment is merely an illustration, not intended to limit or restrict the invention.

[0066] The pull rods 38 and 39 further respectively comprise connecting units 38a and 39a, both of which can optionally be inserted with the third shafts 4e and 6e, such that they are separately and pivotally connected with the latching frames 41 and 61, the latching supports 42 and 62, one end of the second driving pieces 45 and 65 connected to the pull rods 38 and 39. The pull rods 38 and 39 in the embodiment are illustrated as round-shaped rods, however, it should be understood that the actual shapes and the lengths of the pull rods 38 and 39 are not limited by those described in the embodiment herein, and the shapes and the lengths of the connecting units 38a and 39a also can be changed according to actual needs.

[0067] When the push plate 111 is pressed down by the user for unlatching the door lock through the actuation mechanism, pull rods 38 and 39 enable the connecting units 38a and 39a thereof to drive the latching supports 42 and 62 and the second driving pieces 45 and 65 inside the latch members 4 and 6 respectively, and enable the second

driving pieces 45 and 65 to change the positions of the stop pieces 44 and 64 in order to simultaneously drive the latching bodies 43 and 63 to be retracted to inside of the latching frames 41 and 61. Therefore, when the actuation mechanism is actuated by an external force, the pull rods 38 and 39 are driven to enable the latch members 4 and 6 to be simultaneously actuated for unlatching or latching the door locks.

[0068] When the push plate 111 is pressed down by a user for unlatching the door lock, the force actuating the actuation mechanism is released and the actuation mechanism is restored to the original latched position. The force to drive the pull rods 38 and 39 is also removed, thereby the latching supports 42 and 62 and the second driving pieces 45 and 65 driven by the pull rods 38 and 39 can be restored to their original positions by the recoiled force of the second spring member 4d generated during the motion of unlatching the door lock. Subsequently, the second driving pieces 45 and 65 enable the stop pieces 44 and 64 to be restored to their original positions by the second spring member 4d and another second spring member (not shown) positioned between the driving pieces 45 and 65 and the stop pieces 44 and 64. Thus, the stop pieces 44 and 64 are urged against the latching bodies 43 and 63, which are restored to and retained outside the latching supports; thereupon the latch members simultaneously carry out the motion of latching the door lock.

[0074] Since the latch block 33 is pivotally connected to each third nose 37c on the first driving piece 37, the force driving the latch block 33 to swing backwards and retract inside the slide support 31 also actuates the first driving piece 37. The sliding block 36 connected to the first driving piece 37 and the pull rods 38 and 39 connected to the sliding block 36 jointed actuate the second driving pieces 45 and 65 inside the latch member 4 and the latch member 6 simultaneously. The second driving pieces 45 and 65 are moved due to the force, thereby the first spring member 4b connected to the stop piece 44 is forced to actuate the stop piece 44, which is then changed from its original angle (i.e., the angle urging the stop piece 44 against the latching body 43) to

another angle without urging the stop piece 44 against the latching body 43 under such force.

[0075] Therefore, the force transferred by the pull rods 38 and 39 can simultaneously actuate the second driving pieces 45 and 65 and the stop pieces 44 and 64, such that the stop pieces 44 and 64 are unable to urge against the latching bodies 43 and 63, and the second driving pieces 45 and 65 can drive the latching bodies 43 and 63 to move towards the actuation mechanism inside the door lock structure. Thereby the latching bodies 43 and 63 are retracted back to their original positions for unlatching the door lock.

[0078] The second driving pieces 45 and 65 inside the latch members 4 and 6 of the fire-blocking door lock structure of the present invention can simultaneously enable the latching bodies 43 and 63 to be shifted between positions of being retracted inside and being extended outside the latch frame supported by a force from the pull rods 38 and 39. The present invention resolves a conventional problem by simplifying the fire-blocking door lock structure, enabling various parts to be securely coupled and connected, thereby the assembly process can be shortened and the manufacturing cost of making various components is reduced. The invention, therefore, is favorable for the assembly and manufacture of a fire-blocking door lock structure.